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Specification

The Specification has been amended to correct a reference to the "x-ray facing surface" to correctly reflect reference number "36".

Claim Rejections

Claims 1-12,13-17, and 20 were rejected under 35 USC 112, second paragraph for being indefinite. Claims 1-4, 6, 9-11, 13, 14,16, 18, and 19 were rejected under 35 USC 103(a) as being unpatentable over Matsumoto (US 4,413,355) in view of Berry (US 6,481,969). Claim 10 was rejected under 35 USC 103(a) as being unpatentable over Matsumoto and Berry in further view of Siebolds (2002/0020315 A1). Claim 12 was rejected under 35 USC 103(a) as being unpatentable over Matsumoto and Berry in further view of Barber (US 4,842,485). Claims 1-4,6,7,13,15, and 17-20 were rejected under 35 USC 103(a) as being unpatentable over Matsumoto in view of Suzuki (US 6,449,000). Claim 10 was rejected 35 USC 103(a) as unpatentable over Matsumoto and Suzuki in further view of Siebolds. Claim 12 was rejected under 35 USC 103(a) as unpatentable over Matsumoto and Suzuki in further view of Barber. Claims 5 and 15 were rejected under 35 USC 103(a) as unpatentable over Hansen (2002/0191749 A1) in view of Berry. Claim 8 was deemed allowable if rewritten in independent form.

Claims 1-12,13-17, and 20 were rejected under 35 USC 112

Claims 1-12,13-17, and 20 were rejected under 35 USC 112, second paragraph for being indefinite. The claims have been appropriately amended to remove any ambiguity as suggested.

Claims 1-4, 6, 9-11, 13, 14,16, 18, and 19 were rejected under 35 USC 103(a)

Claims 1-4, 6, 9-11, 13, 14,16, 18, and 19 were rejected under 35 USC 103(a) as being unpatentable over Matsumoto (US 4,413,355) in view of Berry (US 6,481,969). The Applicant respectfully traverses this rejection and requests reconsideration in light of the amendments provided and the following arguments. The Applicant notes that the claims now fall into three categories after amendments (1-6, 9-12 which are amended and require new consideration) (claim 8 which has been rewritten in independent form) and (claims 13-20 which stand substantially as submitted and so require traversal of the present rejections).

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I will address them as such (noting that claim 8 does not need addressing). As for the amended portions of the claims, the Applicant respectfully notes that the specification in paragraph 20 discusses the uses of multiple locations to allow for an effective modification of the effect of adding balancing weights. "It should be noted that through the use of multiple locations from the central neck portion 38 outward toward the perimeter surface 34 the effect on balancing of a given weight element 32 can be either minimized or maximized respectively". The present amendments, therefore, are directed towards the use of multiple locations from the neck to the perimeter such that such varied results may be achieved. The Applicant notes that this is not taught in the cited references either alone or in combination and therefore should be allowable.

More importantly, though, the Applicant traverses the underlying rejection. As will be repeated throughout this office action, the Applicant notes that none of the cited art that is directed towards x-ray tube targets mentions in any way the use of additive weights to balance the target. The references cited to this effect are directed (such as Berry) to turbines or other non-similar apparatuses. It should be noted that none of these references citing balancing features are subject to the intense heat and strain resultant from the bombarding of electrons as are x-ray tubes. There has been a long time need for improvement over the costly and complex machining operations used in balancing x-ray targets. The long time existence of balancing references such as Barber (4,842,485) in combination with the complete absence of use in x-ray tube targets weighs heavily in favor of non-obviousness. The present invention is directed specifically towards x-ray target assemblies and installing such balancing features directly onto the x-ray target. Such a feature is unique to the present invention and is not taught by the cited references either alone or in combination. The Applicant, therefore, requests reconsideration.

Claim 10 was rejected under 35 USC 103(a)

Claim 10 was rejected under 35 USC 103(a) as being unpatentable over Matsumoto and Berry in further view of Siebolds (2002/0020315 A1). Again, the Applicant respectfully notes that the present claim is subject to an amendment of the

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underlying base claim and therefore deserves reconsideration. The Applicant again incorporates a traversal of the combination of references cited as discussed above.

Claim 12 was rejected under 35 USC 103(a)

Claim 12 was rejected under 35 USC 103(a) as being unpatentable over Matsumoto and Berry in further view of Barber (US 4,842,485). Again the amendments require reconsideration and therefore a traversal of this particular rejection is asserted but possibly mute.

Claims 1-4,6,7,13,15, and 17-20 were rejected under 35 USC 103(a)

Claims 1-4,6,7,13,15, and 17-20 were rejected under 35 USC 103(a) as being unpatentable over Matsumoto in view of Suzuki (US 6,449,000). The Applicant respectfully traverses this rejection. The Applicant notes that Suzuki teaches the spinning of a photosensitive drum in a laser printer or similar apparatus. The Applicant respectfully traverses the obviousness of combining these references to render the present invention obvious. The Suzuki reference is directed toward an apparatus that is strikingly dissimilar to an x-ray target. The Suzuki reference does not require the extreme tolerance and accuracy required in x-ray target construction and balancing. Nor must it tolerate the extreme heat and bombardment suffered by x-ray targets. As such, the Suzuki reference approaches balancing by simply placing weights almost anywhere on any of the surrounding structures to the palate. The present invention takes the novel and unprecedented step of applying balancing features directly to the x-ray target element as has never been done. The fact that weights have been added to laser printers or car rims fails to render the present advancement obvious. The present invention satisfies a long-felt need that was recognized, persistent, and not solved by others. Henceforth, this is why existing x-ray target assemblies are still subjected to timely, extremely costly manufacturing. This is why when an unbalance occurs, the parts must routinely be scrapped or remanufactured at highly undesirable cost to producers. The present invention provides such large benefits in cost-effectiveness, if obvious it would have become the norm in the art and not the subject matter of the present application.

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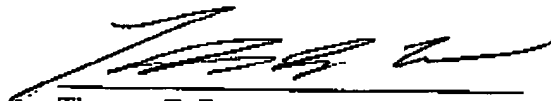
Claims 10 and 12 rejected under 35 USC 103(a)

Claim 10 was rejected 35 USC 103(a) as unpatentable over Matsumoto and Suzuki in further view of Siebolds. Claim 12 was rejected under 35 USC 103(a) as unpatentable over Matsumoto and Suzuki in further view of Barber. Claims 5 and 15 were rejected under 35 USC 103(a) as unpatentable over Hansen (2002/0191749 A1) in view of Berry. The Applicant respectfully traverses these rejections and incorporates the above argument. The Applicant notes that the references cannot be combined to render obvious the positioning of balancing features on a plurality of positions on an x-ray target face. (or the next and perimeter which are also claimed specifically).

With this response, it is respectfully submitted that all rejections and objections of record have been overcome and that the case is in condition for allowance.

Should the Examiner have any questions or comments, he is respectfully requested to contact the undersigned.

Respectfully submitted,



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